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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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JACK CHANEY

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10/06/2006

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EXAMINER

CALLAHAN, PAUL E

ART UNIT

PAPER NUMBER

2137

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/226,577	<b>Applicant(s)</b> CHANEY, JACK	
	<b>Examiner</b> Paul Callahan	<b>Art Unit</b> 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-14,42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) 42 and 43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8-7-06</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1, 3-8, and 10-14 were pending in the application at the time of the previous Office Action. Via the amendment submitted 7-6-2006, new claims 42 and 43 have been added.

2. The Examiner has made a review of the newly added claims in light of the specification, and the restriction requirement in the instant application made in the Office Action mailed 9-24-03.

### ***Election/Restrictions***

3. Newly submitted claims 43 and 43 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

- Claims 1, 3-8, and 10-14 are drawn to a system which copy protects and scrambles data, classified in class 380, subclass 203. (Henceforth Group I).
- Claims 42 and 43 are drawn to a method for using a system that separates the functions of descrambling and reconvertng copy protected data to non-copy protected data between two entities, classified in class 380, subclass 228.  
(Henceforth Group II)

The inventions in Groups I and 11 are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because it provides protection to data.

The subcombination has separate utility such as diversifying the entities needed to process data, thereby increasing security.

The search required for Group I is not required for Group II.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 42 and 43 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Response to Arguments***

4. Applicant's arguments filed 7-6-06 have been fully considered but they are not persuasive.

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The Applicant argues that Hartung et al.: "Multimedia Watermarking Techniques", Proceedings of the IEEE, Vol. 87, No. 7, 1999, page 1101, (henceforth Hartung) cannot be considered as prior art to the instant invention since it has a publication date later in time to the filing date of the instant application. However, the Examiner maintains that Hartung does constitute prior art as per the language of 35 USC 102(a), language directed towards an invention that was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent. On the face of the Hartung paper, reference is made to the paper having been submitted for publication on Oct. 20, 1997, which is earlier than the filing date of the instant application. Therefore, as per 35 USC 102(a) the invention was known or used by another in this country before the invention thereof by the applicant.

The applicant argues that the combination of Girod and Hartung fail to teach the feature according to claim 1 of "transmitting the scrambled signal and said data signal to a receiver for subsequent recovery of said scrambled signal." The applicant apparently is arguing that the language of claim 1 should be read to mean that the scrambled signal and copy protect data signal are not combined even though they are transmitted together to a receiver. The Examiner maintains that a reasonably broad interpretation of the claim language does indicated the signals are combined, and that the combination of Girod and Hartung, where Hartung teaches a watermark-key signal that is embedded into a broadcast signal, does read on the claim language.

The applicant argues that Hartung fails to teach scrambling of the data signal. Yet it was Girod that was used to teach this feature in his step of encrypting data that has been watermarked and compressed (see fig. 4 of Girod).

The applicant argues that the examiner has failed to provide a proper statement of motivation for making the combination of Girod and Hartung. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motive to combine, as stated in the rejections of the claim is that such an arrangement of data, where a key used in decrypting a watermark signal is transmitted with the signal, would facilitate rapid recovery of the signal since there would be no lag time needed to generate a key, or request an appropriate key from another location. Motive to make the combination can also be found at col. 3 lines 1-15 of Girod where the advantage of using an encrypted signal for greater security is discussed. This is also discussed in Hartung, page 1101, in the first paragraph of the left hand column. The fact that Hartung and Girod both utilize an encryption-decryption algorithm at the transmitter and receiver indicates that no extensive modification would be required to make this combination.

The applicant argues in traverse of the rejection of claim 6 by asserting that the combination of Girod and Hartung fail to teach the sequence of steps recited by claim 6 of reconvert the recovered copy protected signal back into an encoded signal using an inverse copy protection function, wherein the inverse function utilizes copy protection data from said copy protection data signal. However, these steps are indeed taught. First, Girod teaches descrambling of the data signal by virtue of the decryption step (see col. 10 lines 25-43), Girod teaches a decoding step at col. 10 lines 40-43. Hartung was used to teach the step of utilizing an inverse copy protection function to convert the recovered copy-protected signal back into a mere encoded signal since Girod does not make it clear where a receiver obtains the pseudo-noise signal used to spread the watermark. Hartung then teaches the use of such data in page 1101, in the first paragraph of the left hand column.

The applicant asserts that the limitations of claims 5, 7, 8, 12, and 14 are not taught by the combination of Girod and Hartung, based upon the arguments presented *supra*. The Examiner contends that all points raised by the applicant have been addressed *supra*, and the limitations of those claims are indeed taught.

The applicant asserts that the features of claim 10 of a combiner and a transmitter are not taught. Yet such are indeed taught by Girod at fig. 2A, element 38: Summing Node, and a transmitter is taught at fig. 1: "Transmission to Decoder."

With regards to claim 11, the applicant asserts that Girod fails to teach a transmitter that transmits the scrambled signal and the data signal as a single signal.

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Yet the single signal is created by virtue of the combiner at fig. 2A element 38, and transmission is taught at fig. 1: "Transmission to Decoder."

The applicant argues in traverse of the rejection of claim 13 by reference to the points made in the arguments presented for claim 6. The Examiner points to the responding points made supra for claim 6 to support of the rejection of claim 13.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

***(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.***

6. Claims 1, 3-8, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Girod et al. in view of Hartung et al.: "Multimedia Watermarking Techniques", Proceedings of the IEEE, Vol. 87, No. 7, 1999, page 1101.

As for claim 1, in their abstract, Girod et al. teach watermarking a compressed signal. In figure 1, the lower input is a digital signal, which is compressed by element 10 (see lines 47-62 of column 3 and line 60 of column 4 through line 21 of column 5 for a description of figure 1), thereby reading on clause a) of the claims. Element 26 watermarks the compressed signal; the watermark is inserted using a frequency spreading signal, which meets applicant's data signal representing copy protection data, while the watermarking operations read on the copy protection function. In the abstract,



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Girod et al. say that encryption/decryption capabilities can be included but does not specify how or where. Claim 8 and figure 4 make it clear that encryption is applied after compression and watermarking. Encryption is a type of scrambling and so clause c) is met. The reversal of these steps is implied by figures 1 and 2c. While Girod et al. specifically disclose decoding preceding removal of the watermark; these steps are interchangeable, as is understood from lines 7-10 of column 5. This is part of the benefit of Girod et al.'s watermarking method. As described at the top of column 9, removal of the watermark requires the sequence that was used to embed the watermark. Girod et al. do not indicate how the receiver acquires the sequence. In the first paragraph of page 1101, Hartung et al. describe appending a decryption key to an encrypted watermark in order to facilitate recovery of the encrypted information. This reads on the claim limitation of transmission of a scrambled signal and a data signal to a receiver for subsequent recovery of said scrambled signal. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention to include this feature of Hartung into the system of Girod. It would be desirable to do so to facilitate rapid recovery of the scrambled signal.

The cited section of Hartung et al. also renders claims 3 and 4 obvious. The elements of claims 5 and 6 are rendered obvious by the steps described by Girod et al.

Claims 7, 8, and 10-14 are directed towards the same limitations as claims 1, and 3-6, therefore they are rejected on the same basis.

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**Conclusion**

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-3869. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Emmanuel Moise, can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is: (571) 272-8300.

PEC

9-29-06

  
EMMANUEL L. MOISE  
SUPERVISORY PATENT EXAMINER